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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FERNANDES, CHERYL M

ART UNIT PAPER NUMBER

2163

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,806

Applicant(s)

GOUDIE ET AL.

Examiner

Cheryl M. Fernandes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is responsive to the Request for Continued Examination filed May 31, 2005. Claims 1-7 are presented for examination. Claims 1-5 have been amended. Claims 6 and 7 have been added.

Response to Arguments

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

2. Referring to the objection to the drawings wherein the drawings were objected to for not showing the second latest read pointer, latest write pointer, and committed write pointers, Applicant's deletion of the aforementioned terms from the claims overcomes the objection. As such, the objection to the drawings is withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 1 and 2, the claims recite the limitation "updating the location of a current head pointer...corresponding to the end of the data". However, it is unclear

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as to which data is being referred to- the data stored in the queue in memory (preamble) or the data in a head of the queue (2nd paragraph of the claims).

Referring to claims 1 and 2, the claims recite the limitation "transferring the data to a destination". However, it is unclear as to which data is being referred to- the data stored in the queue in memory (preamble) or the data in a head of the queue (2nd paragraph of the claims).

Referring to claims 1 and 2, the claims recite the limitation "...updating the location of a committed head pointer to a location corresponding to the end of the data". However, it is unclear as to which data is being referred to- the data stored in the queue in memory (preamble) or the data in a head of the queue (2nd paragraph of the claims).

Referring to claim 2, the claim recites in the last paragraph, the limitation "upon receiving no confirmation or a negative confirmation that the data transfer was successful, updating the location of the current head pointer to assume the location of the committed head pointer". However, it is unclear as to what the location of the committed head pointer is, as even though a location of a committed head pointer is mentioned in the 5th paragraph of the claim, the location is dependent upon the receipt of a confirmation that the data transfer was successful. Examiner respectfully asserts that the last paragraph of the claim does not require receipt of a confirmation that the

data transfer was successful, rather the opposite. As such, the claim limitation is indefinite.

Referring to claim 5, the claim recites the limitation "...to the end of the data" in the 3rd and 4th paragraphs of the claim. However, it is unclear as to which data is being referred to- the data stored in the queue in memory (preamble of claim 1), the data in a head of the queue (2nd paragraph of claim 1), or the received data in the tail of the queue (2nd paragraph of claim 5).

Referring to claim 5, the claim recites the limitation "writing received data to a tail of the queue" and "the received data" in the 2nd and 4th paragraphs of the claim. However, it is unclear as to what the received data is, as there is no prior mention of "received data" in claim 1. It is unclear as to whether or not the received data is the received confirmation.

Due to the 35 USC § 112 rejections, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 5,016,221 issued to Hamstra, and further in view of US Patent Number 6,817,018 issued to Clarke et al (hereafter Clarke).

Referring to claim 1, Hamstra discloses a method of managing data stored in a queue in memory (FIFO memory configuration, see Abstract¹), the method comprising:

- reading data from a head of the queue² ('binary information' is read, Figure 3E element 50, col. 8, lines 47-49; col. 12, lines 8-24, Fig. 3G, element 30);
- updating the location of a current head pointer ('read pointer', see Fig. 3E, element 30) to a location corresponding to the end of the data (read pointer advanced to EOF, col. 8, line 47 to col. 9, line 19, see Fig. 3E; col. 12, lines 8-24, Fig. 3G, element 30);
- transferring the data to a destination (binary information is transmitted to 'shared data medium' or 'optical fiber ring LAN', Fig. 4, element 22; col. 9, lines 39-52; col. 10, lines 8-31); and then,
- updating the location of a committed head pointer to a location corresponding to the end of the data (the read pointer is committed as it is advanced until it reaches the commit pointer, the commit pointer indicating the end of the data, see Fig. 3G, col. 12, lines 8-24).

¹ Examiner asserts that since Hamstra discloses a FIFO memory configuration, he is referring to a method of managing a queue in memory.

² Examiner asserts that reading data from a FIFO queue is done from the head of the queue.

While Hamstra teaches all of the above claimed subject matter and also teaches receiving a 'readiness status signal' from a LAN that indicates readiness to receive incoming binary information to be committed (col. 10, lines 26-61), Hamstra fails to teach receiving a confirmation of success in *response* to the data being transferred.

However, Clarke teaches analogous art that includes receiving a confirmation of commitment from a receiver program in response to a batch of messages requiring commitment transferred to the receiver program by a sender program (Abstract; col. 3, lines 15-40 and 57-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hamstra to include receiving a confirmation that a data transfer was successful, as taught by Clarke.

The ordinary skilled artisan would have been motivated to modify Hamstra per the above for the purpose of providing for the safe delivery of messages between application programs such that no messages are lost and none are delivered more than once (Clarke, see Field of Invention).

Referring to claim 2, Hamstra discloses a method of managing data stored in a queue in memory (FIFO memory configuration, see Abstract³), the method comprising:

- reading data from a head of the queue⁴ ('binary information' is read, Figure 3E element 50, col. 8, lines 47-49; col. 12, lines 8-24, Fig. 3G, element 30);

- updating the location of a current head pointer ('read pointer', see Fig. 3E, element 30) to a location corresponding to the end of the data (read pointer advanced to EOF, col. 8, line 47 to col. 9, line 19, see Fig. 3E; col. 12, lines 8-24, Fig. 3G, element 30);
- transferring the data to a destination (binary information is transmitted to 'shared data medium' or 'optical fiber ring LAN', Fig. 4, element 22; col. 9, lines 39-52; col. 10, lines 8-31); and then,
- updating the location of a committed head pointer to a location corresponding to the end of the data (the read pointer is committed as it is advanced until it reaches the commit pointer, the commit pointer indicating the end of the data, see Fig. 3G, col. 12, lines 8-24); and
- updating the location of the current head pointer to assume the location of the committed head pointer (the read pointer is committed as it is advanced until it reaches the commit pointer, thereby assuming its location as a committed head pointer, see Fig. 3G, col. 12, lines 8-24).

While Hamstra teaches all of the above claimed subject matter and also teaches receiving a 'readiness status signal' from a LAN that indicates readiness to receive incoming binary information to be committed (col. 10, lines 26-61), Hamstra fails to teach receiving a confirmation of success or a negative confirmation in *response* to the data being transferred.

³ Examiner asserts that since Hamstra discloses a FIFO memory configuration, he is referring to a

However, Clarke teaches analogous art that includes receiving a positive and negative confirmation of commitment from a receiver program in response to a batch of messages requiring commitment transferred to the receiver program by a sender program (Abstract; col. 3, lines 15-40 and 57-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hamstra to include receiving a positive or negative confirmation that a data transfer was successful, as taught by Clarke.

The ordinary skilled artisan would have been motivated to modify Hamstra per the above for the purpose of providing for the safe delivery of messages between application programs such that no messages are lost and none are delivered more than once (Clarke, see Field of Invention).

Referring to claims 3 and 6, the combination of Hamstra/Clarke discloses storing the current head pointer location and the committed head pointer location, and using the current head pointer and the committed head pointer to manage data subsequently read (Hamstra, 'registers' store memory address values of the pointers, col. 6, lines 8-39) from a second queue (Hamstra, 'one or more data frames', col. 6, lines 59-65; Clarke, 'one or more queue managers', Abstract).

Referring to claims 4 and 7, the combination of Hamstra/Clarke discloses:

method of managing a queue in memory.

⁴ Examiner asserts that reading data from a FIFO queue is done from the head of the queue.

- reading second data from the head of the queue, updating the location of a second current head pointer to a location corresponding to the end of the second data, transferring the second data to the destination (Refer to the first 3 limitations of claim 1 addressed above with regard to the above mentioned limitations of claim 4 (Hamstra, see col. 6, line 59- col. 7, line 8 for the presence of the second data); and
- upon receiving confirmation that the transfer of the second data was successful (Clarke, Abstract; col. 3, lines 15-40 and 57-65), removing the second current head pointer from the location corresponding to the end of the second data (Hamstra, col. 12, lines 8-24).

Referring to claim 5, the combination of Hamstra/Clarke discloses:

- writing received data to a tail of the queue⁵ (Hamstra, 'stored binary information', Figures 3B and 3C, element 50 in col. 7, lines 17-43);
- updating the location of a current tail pointer (Hamstra, 'W-pointer', see Figures 3B and 3C pertaining to element 34) to a location corresponding to the end of the data (Hamstra, col. 7, lines 40-43); and,
- upon receiving confirmation that the received data is correct (Clarke, Abstract; col. 3, lines 15-40 and 57-65), updating the location of a committed tail pointer (Hamstra, 'commit pointer', Figures 3C and 3D, element 32) to a location

⁵ Examiner asserts that writing data to a FIFO queue is done from the tail of the queue.

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corresponding to the end of the data (Hamstra, col. 11, line 59 to col. 12, line 7).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes whose telephone number is (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 7, 2005
CMF



UYEN LE
PRIMARY EXAMINER